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RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number: 10/539,377
Source: PLT
Date Processed by STIC: 03/03/2006

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PCT

RAW SEQUENCE LISTING

DATE: 03/03/2006

PATENT APPLICATION: US/10/539,377

TIME: 13:06:05

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Output Set: N:\CRF4\03032006\J539377.raw

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3 <110> APPLICANT: NOVARTIS AG
4     NOVARTIS PHARMA GMBH
5     THE SCRIPPS RESEARCH INSTITUTE
6     BEVAN, Stuart
7     PATAPOUTIAN, Ardem
8     STORY, Gina M.
10 <120> TITLE OF INVENTION: ANKTM1, A COLD-ACTIVATED TRP-LIKE CHANNEL EXPRESS IN
NOCICEPTIVE
11     NEURONS
13 <130> FILE REFERENCE: SCRIP1600-1
15 <140> CURRENT APPLICATION NUMBER: US 10/539,377
C--> 16 <141> CURRENT FILING DATE: 2005-06-15
18 <150> PRIOR APPLICATION NUMBER: PCT/EP2003/014403
19 <151> PRIOR FILING DATE: 2003-12-17
21 <150> PRIOR APPLICATION NUMBER: US 60/434,540
22 <151> PRIOR FILING DATE: 2002-12-18
24 <160> NUMBER OF SEQ ID NOS: 13
26 <170> SOFTWARE: PatentIn version 3.3
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 320
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31 <213> ORGANISM: Mus musculus
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40              20              25              30
43 Ala His Met Met Asn Leu Gly Ser Tyr Cys Leu Gly Leu Ile Pro Met
44              35              40              45
47 Thr Leu Leu Val Val Lys Ile Gln Pro Gly Met Ala Phe Asn Ser Thr
48              50              55              60
51 Gly Ile Ile Asn Gly Thr Ser Ser Thr His Glu Glu Arg Ile Asp Thr
52 65              70              75              80
55 Leu Asn Ser Phe Pro Ile Lys Ile Cys Met Ile Leu Val Phe Leu Ser
56              85              90              95
59 Ser Ile Phe Gly Tyr Cys Lys Glu Val Ile Gln Ile Phe Gln Gln Lys
60              100             105             110
63 Arg Asn Tyr Phe Leu Asp Tyr Asn Asn Ala Leu Glu Trp Val Ile Tyr
64              115             120             125
67 Thr Thr Ser Ile Ile Phe Val Leu Pro Leu Phe Leu Asn Ile Pro Ala
68              130             135             140
71 Tyr Met Gln Trp Gln Cys Gly Ala Ile Ala Ile Phe Phe Tyr Trp Met
72 145             150             155             160
75 Asn Phe Leu Leu Tyr Leu Gln Arg Phe Glu Asn Cys Gly Ile Phe Ile

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79 Val Met Leu Glu Val Ile Phe Lys Thr Leu Leu Arg Ser Thr Gly Val
80          180          185          190
83 Phe Ile Phe Leu Leu Leu Ala Phe Gly Leu Ser Phe Tyr Val Leu Leu
84          195          200          205
87 Asn Phe Gln Asp Ala Phe Ser Thr Pro Leu Leu Ser Leu Ile Gln Thr
88          210          215          220
91 Phe Ser Met Met Leu Gly Asp Ile Asn Tyr Arg Asp Ala Phe Leu Glu
92 225          230          235          240
95 Pro Leu Phe Arg Asn Glu Leu Ala Tyr Pro Val Leu Thr Phe Gly Gln
96          245          250          255
99 Leu Ile Ala Phe Thr Met Phe Val Pro Ile Val Leu Met Asn Leu Leu
100          260          265          270
103 Ile Gly Leu Ala Val Gly Asp Ile Ala Glu Val Gln Lys His Ala Ser
104          275          280          285
107 Leu Lys Arg Ile Ala Met Gln Val Glu Leu His Thr Asn Leu Glu Lys
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127          20          25          30
130 Ala His Met Met Asn Leu Gly Ser Tyr Cys Leu Gly Leu Ile Pro Met
131          35          40          45
134 Thr Ile Leu Val Val Asn Ile Lys Pro Gly Met Ala Phe Asn Ser Thr
135          50          55          60
138 Gly Ile Ile Asn Glu Thr Ser Asp His Ser Glu Ile Leu Asp Thr Thr
139 65          70          75          80
142 Asn Ser Tyr Leu Ile Lys Thr Cys Met Ile Leu Val Phe Leu Ser Ser
143          85          90          95
146 Ile Phe Gly Tyr Cys Lys Glu Ala Gly Gln Ile Phe Gln Gln Lys Arg
147          100          105          110
150 Asn Tyr Phe Met Asp Ile Ser Asn Val Leu Glu Trp Ile Ile Tyr Thr
151          115          120          125
154 Thr Gly Ile Ile Phe Val Leu Pro Leu Phe Val Glu Ile Pro Ala His
155          130          135          140
158 Leu Gln Trp Gln Cys Gly Ala Ile Ala Val Tyr Phe Tyr Trp Met Asn
159 145          150          155          160
162 Phe Leu Leu Tyr Leu Gln Arg Phe Glu Asn Cys Gly Ile Phe Ile Val
163          165          170          175
166 Met Leu Glu Val Ile Leu Lys Thr Leu Leu Arg Ser Thr Val Val Phe
167          180          185          190
170 Ile Phe Leu Leu Leu Ala Phe Gly Leu Ser Phe Tyr Ile Leu Leu Asn

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171          195          200          205
174 Leu Gln Asp Pro Phe Ser Ser Pro Leu Leu Ser Ile Ile Gln Thr Phe
175          210          215          220
178 Ser Met Met Leu Gly Asp Ile Asn Tyr Arg Glu Ser Phe Leu Glu Pro
179 225          230          235          240
182 Tyr Leu Arg Asn Glu Leu Ala His Pro Val Leu Ser Phe Ala Gln Leu
183          245          250          255
186 Val Ser Phe Thr Ile Phe Val Pro Ile Val Leu Met Asn Leu Leu Ile
187          260          265          270
190 Gly Leu Ala Val Gly Asp Ile Ala Glu Val Gln Lys His Ala Ser Leu
191          275          280          285
194 Lys Arg Ile Ala Met Gln Val Glu Leu His Thr Ser Leu Glu Lys Lys
195          290          295          300
198 Leu Pro Leu Trp Phe Leu Arg Lys Val Asp Gln Lys Ser Thr Ile
199 305          310          315
202 <210> SEQ ID NO: 3
203 <211> LENGTH: 352
204 <212> TYPE: PRT
205 <213> ORGANISM: Drosophila melanogaster
207 <400> SEQUENCE: 3
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213 Leu Ser Gln Lys Tyr Leu Gln Met Lys Trp Asn Ser Tyr Gly Lys Tyr
214          20          25          30
217 Phe His Leu Ala Asn Leu Leu Ile Tyr Ser Ile Phe Leu Val Phe Val
218          35          40          45
221 Thr Ile Tyr Ser Ser Leu Met Met Asn Asn Ile Glu Leu Lys Ala Gly
222          50          55          60
225 Asp Asn Lys Thr Met Ser Gln Tyr Cys Asn Met Gly Trp Glu Gln Leu
226 65          70          75          80
229 Thr Met Asn Leu Ser Gln Asn Pro Ser Val Ala Ser Gln Ile Arg Leu
230          85          90          95
233 Asp Ser Cys Glu Glu Arg Ile Asn Arg Thr Thr Ala Ile Leu Phe Cys
234          100          105          110
237 Ala Val Val Ile Val Val Tyr Ile Leu Leu Asn Ser Met Arg Glu Leu
238          115          120          125
241 Ile Gln Ile Tyr Gln Gln Lys Leu His Tyr Ile Leu Glu Thr Val Asn
242          130          135          140
245 Leu Ile Ser Trp Val Leu Tyr Ile Ser Ala Leu Val Met Val Thr Pro
246 145          150          155          160
249 Ala Phe Gln Pro Asp Gly Gly Ile Asn Thr Ile His Tyr Ser Ala Ala
250          165          170          175
253 Ser Ile Ala Val Phe Leu Ser Trp Phe Arg Leu Leu Leu Phe Leu Gln
254          180          185          190
257 Arg Phe Asp Gln Val Gly Ile Tyr Val Val Met Phe Leu Glu Ile Leu
258          195          200          205
261 Gln Thr Leu Ile Lys Val Leu Met Val Phe Ser Ile Leu Ile Ile Ala
262          210          215          220
265 Phe Gly Leu Ala Phe Tyr Ile Leu Leu Ser Lys Ile Ile Asp Pro Gln

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266 225          230          235          240
269 Pro Asn His Leu Ser Phe Ser Asn Ile Pro Met Ser Leu Leu Arg Thr
270          245          250          255
273 Phe Ser Met Met Leu Gly Glu Leu Asp Phe Val Gly Thr Tyr Val Asn
274          260          265          270
277 Thr Tyr Tyr Arg Asp Gln Leu Lys Val Pro Met Thr Ser Phe Leu Ile
278          275          280          285
281 Leu Ser Val Phe Met Ile Leu Met Pro Ile Leu Leu Met Asn Leu Leu
282          290          295          300
285 Ile Gly Leu Ala Val Gly Asp Ile Glu Ser Val Arg Arg Asn Ala Gln
286 305          310          315          320
289 Leu Lys Arg Leu Ala Met Gln Val Val Leu His Thr Glu Leu Glu Arg
290          325          330          335
293 Lys Leu Pro His Val Trp Leu Gln Arg Val Asp Lys Met Glu Leu Ile
294          340          345          350
297 <210> SEQ ID NO: 4
298 <211> LENGTH: 368
299 <212> TYPE: PRT
300 <213> ORGANISM: Drosophila melanogaster
302 <400> SEQUENCE: 4
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308 Val Val Gln Arg Tyr Leu Gln Glu Leu Trp His Gly Ser Leu Thr Trp
309          20          25          30
312 Ala Ser Trp Lys Ile Leu Leu Leu Leu Val Ala Phe Ile Val Cys Pro
313          35          40          45
316 Pro Val Trp Ile Gly Phe Thr Phe Pro Met Gly His Lys Phe Asn Lys
317          50          55          60
320 Val Pro Ile Ile Lys Phe Met Ser Tyr Leu Thr Ser His Ile Tyr Leu
321 65          70          75          80
324 Met Ile His Leu Ser Ile Val Gly Ile Thr Pro Ile Tyr Pro Val Leu
325          85          90          95
328 Arg Leu Ser Leu Val Pro Tyr Trp Tyr Glu Val Gly Leu Leu Ile Trp
329          100          105          110
332 Leu Ser Gly Leu Leu Leu Phe Glu Leu Thr Asn Pro Ser Asp Lys Ser
333          115          120          125
336 Gly Leu Gly Ser Ile Lys Val Leu Val Leu Leu Leu Gly Met Ala Gly
337          130          135          140
340 Val Gly Val His Val Ser Ala Phe Leu Phe Val Ser Lys Glu Tyr Trp
341 145          150          155          160
344 Pro Thr Leu Val Tyr Cys Arg Asn Gln Cys Phe Ala Leu Ala Phe Leu
345          165          170          175
348 Leu Ala Cys Val Gln Ile Leu Asp Phe Leu Ser Phe His His Leu Phe
349          180          185          190
352 Gly Pro Trp Ala Ile Ile Ile Gly Asp Leu Leu Lys Asp Leu Ala Arg
353          195          200          205
356 Phe Leu Ala Val Leu Ala Ile Phe Val Phe Gly Phe Ser Met His Ile
357          210          215          220
360 Val Ala Leu Asn Gln Ser Phe Ala Asn Phe Ser Pro Glu Asp Leu Arg

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361 225          230          235          240
364 Ser Phe Glu Lys Lys Asn Arg Asn Arg Gly Tyr Phe Ser Asp Val Arg
365          245          250          255
368 Met His Pro Ile Asn Ser Phe Glu Leu Leu Phe Phe Ala Val Phe Gly
369          260          265          270
372 Gln Thr Thr Thr Glu Gln Thr Gln Val Asp Lys Ile Lys Asn Val Ala
373          275          280          285
376 Thr Pro Thr Gln Pro Tyr Trp Val Glu Tyr Leu Phe Lys Ile Val Phe
377          290          295          300
380 Gly Ile Tyr Met Leu Val Ser Val Val Val Leu Ile Asn Leu Leu Ile
381 305          310          315          320
384 Ala Met Met Ser Asp Thr Tyr Gln Arg Ile Gln Val Val Leu Leu Asn
385          325          330          335
388 Ala Leu Leu Ser Asn Ser Thr Leu Phe Ile Asn Ser Tyr Phe Asn His
389          340          345          350
392 Lys Tyr Ile Asn Phe Ile Leu His Cys Val Leu Ile Ile Leu Tyr Phe
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399 <213> ORGANISM: Caenorhabditis elegans
401 <400> SEQUENCE: 5
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407 Ser Val Gln Arg Tyr Leu Thr Glu Val Trp Thr Ala Arg Val Asp Trp
408          20          25          30
411 Ser Phe Gly Lys Phe Val Ala Phe Ser Leu Phe Val Leu Ile Cys Pro
412          35          40          45
415 Pro Ala Trp Phe Tyr Phe Ser Leu Pro Leu Asp Ser Arg Ile Gly Arg
416          50          55          60
419 Ala Pro Ile Ile Lys Phe Val Cys His Ile Val Ser His Val Tyr Phe
420 65          70          75          80
423 Thr Ile Leu Leu Thr Ile Val Val Leu Asn Ile Thr His Lys Met Tyr
424          85          90          95
427 Glu Val Thr Ser Val Val Pro Asn Pro Val Glu Trp Leu Leu Leu Leu
428          100         105         110
431 Trp Leu Ser Gly Asn Leu Val Ser Glu Leu Ser Thr Val Gly Gly Gly
432          115         120         125
435 Ser Gly Leu Gly Ile Val Lys Val Leu Ile Leu Val Leu Ser Ala Met
436          130         135         140
439 Ala Ile Ala Val His Val Leu Ala Phe Leu Leu Pro Ala Val Phe Leu
440 145         150         155         160
443 Thr His Leu Asp Asn Asp Glu Lys Leu His Phe Ala Arg Thr Met Leu
444          165         170         175
447 Tyr Leu Lys Asn Gln Leu Phe Ala Phe Ala Leu Leu Phe Ala Phe Val
448          180         185         190
451 Glu Tyr Leu Asp Phe Leu Thr Val His His Leu Phe Gly Pro Trp Ala
452          195         200         205
455 Ile Ile Ile Arg Asp Leu Met Tyr Asp Leu Ala Arg Phe Leu Val Ile

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VERIFICATION SUMMARY

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